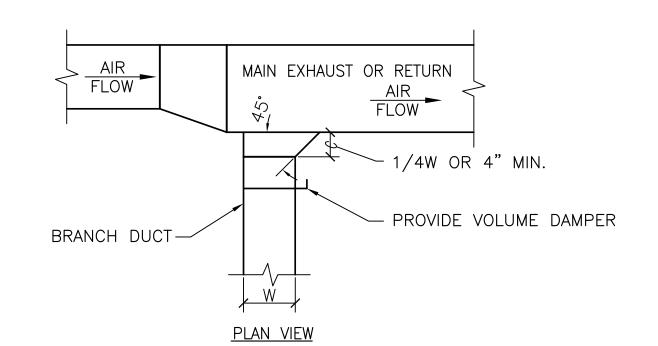
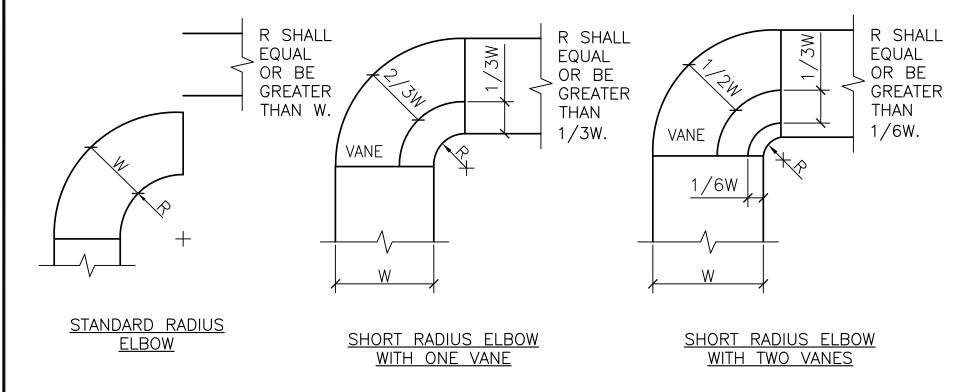


- DAMPER MANUFACTURER'S INSTRUCTIONS, INCLUDING FASTENER OPTIONS AND GAGES FOR SLEEVE AND PERIMETER ANGLES. FIRE DAMPERS MUST BE INSTALLED IN THE PARTITION OR FLOOR AND NOT OUTSIDE THE PENETRATION.
- 2. GALVANIZED SLEEVE: GAGE NOT LESS THAN CONNECTING DUCT. FASTEN SLEEVE TO DAMPER FRAME AND TO PERIMETER ANGLES.
- 3. PERIMETER ANGELS: GALVANIZED STEEL, NOT LESS THAN 1 1/2"x1 1/2", 14 GAGE, TO PROVIDE 1" MINIMUM OVERLAP OF OPENING ON ALL 4 SIDES.
- 4. BREAKAWAY DUCT CONNECTION: CONTRACTOR'S OPTION OF TYPES SHOWN IN SMACNA LPDS, FIG. 2-13, SEAL JOINTS.
- 5. ACCESS PANELS: SIZE AND LOCATION TO PERMIT SERVICING THE FUSIBLE LINK OR LINKS.
- 6. PROVIDE 1/8" CLEARANCE PER EACH 12" OF DUCT HEIGHT AND WIDTH. FILL OPEN SPACE WITH ROCK WOOL FIRESTOP FIBER.

SECTION THRU TYPICAL FIRE DAMPER INSTALLATION



5 EXHAUST OR RETURN BRANCH DUCTWORK NO SCALE



- 1. THE INTERIOR SURFACE OF ALL RADIUS ELBOWS SHALL BE MADE ROUND.
- 2. ALL STANDARD RADIUS ELBOWS SHOWN ON FLOOR PLANS MAY BE MADE SHORT RADIUS ELBOWS. ALL SHORT RADIUS ELBOWS SHALL HAVE VANES. VANES SHALL BE CONSTRUCTED, SUPPORTED AND FASTENED AS RECOMMENDED BY SMACNA.

CEILING DIFFUSER DUCTWORK TAKE-OFFS NO SCALE

MULTI-BLADE DAMPER FOR ROUND

NECK DIFFUSER & OPPOSED BLADE

DAMPER FOR SQUARE NECK DIFFUSER -

CEILING -





MECHANICAL DETAILS Approved: Project Director

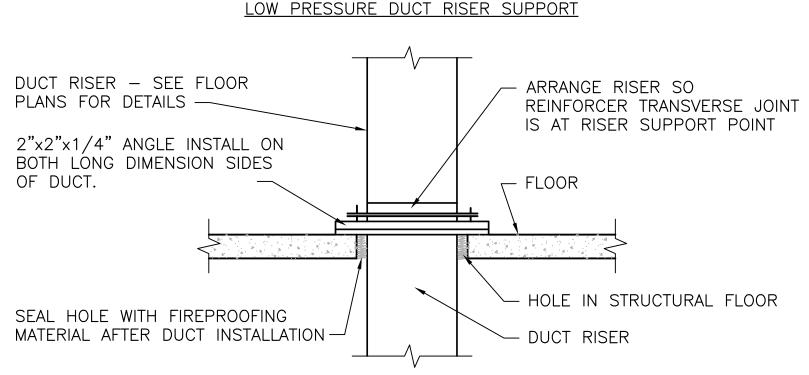
Drawing Title Project Title RENOVATE INPATIENT

MEDICAL/SURGICAL WARD Iowa City VA Medical Center

Drawing Number

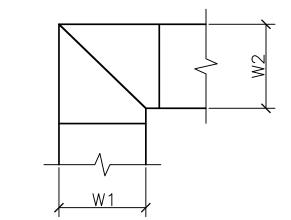
and Facilities Management

DUCT RISER - SEE FLOOR PLANS FOR SIZES -- SHEET METAL SCREWS 4" ON CENTER EXTEND ANGLE 3" BEYOND DUCT ON BOTH LONG DIMENSION SIDES OF DUCT. FOR DUCTS OVER 60" USE 2"x2"x1/8" ANGLE. FLOOR — SEAL HOLE WITH FIREPROOFING — HOLE IN STRUCTURAL FLOOR MATERIAL AFTER DUCT INSTALLATION — - DUCT RISER



MEDIUM AND HIGH PRESSURE DUCT RISER SUPPORT

DUCT RISER SUPPORTS (2) NO SCALE



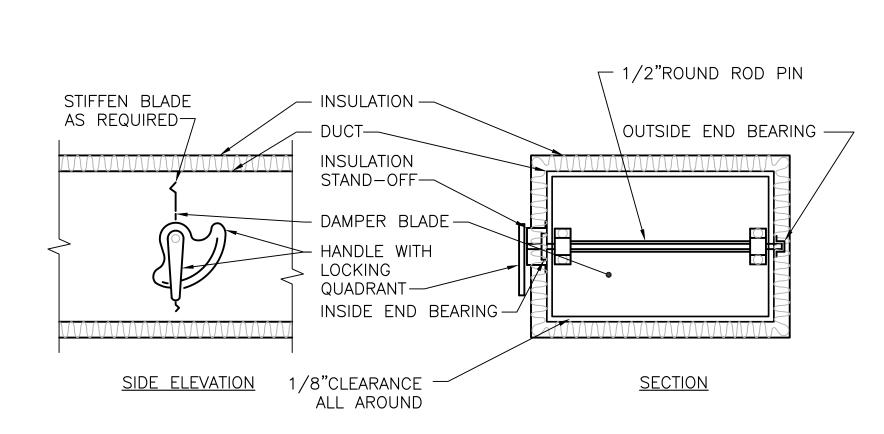
NOTE:

- 1. ALL VANED ELBOWS SHALL BE CONSTRUCTED AND INSTALLED AS DETAILED BY
- 2. WHEN W1 DOES NOT EQUAL W2, VANE SHALL BE SINGLE VANE TYPE REGARDLESS OF W DIMENSION.
- 3. ALL SINGLE VANES SHALL HAVE A 2" RADIUS, 1 1/2" MAXIMUM SPACE BETWEEN VANES AND A 3/4" TRAILING EDGE.

DUCTWORK

4. WHEN W EQUALS W2 AND W1 IS GREATER THAN 20" VANES SHALL BE DOUBLE

DUCTWORK SQUARE VANED ELBOWS



VOLUME EXTRACTOR; ADJUSTABLE

CFM NOTED ON FLOOR PLANS -

DUCT —

1/4 W OR 4" MIN. —

SHOWN ON FLOOR TOP REGISTER

PROVIDE VOLUME

PLANS

AIR SPLIT DUCT TAKE-OFF <u>PLAN VIEW</u>

3 SUPPLY DUCTWORK TAKE-OFFS

FROM FULLY CLOSED POSITION TO

AIR FLOW ►

SUPPLY REGISTER TAKE-OFF

<u>PLAN VIEW</u>

, |≥| \ DUCT

BRANCH DUCT TAKE-OFF

<u>PLAN VIEW</u>

∠MAIN SUPPLY

PROVIDE VOLUME

DAMPER WHEN SHOWN ON FLOOR PLANS OR REQUIRED

W AS SPECIFIED

AIR FLOW

- ADJUSTABLE

METAL ROD

OR LINKAGE



TURNING VANES —

SQUARE ELBOW SHOWN.

PROVIDE ROUND ELBOW

SUPPLY REGISTER

OR BRANCH DUCT -

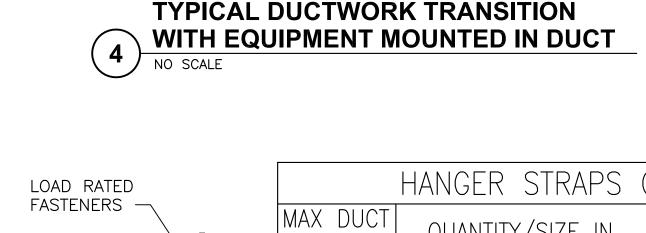
WHEN SHOWN ON FLOOR

MAIN

SUPPLY

DUCT —

PLANS —



REDUCER ----

CIRCULATING WATER PIPING -

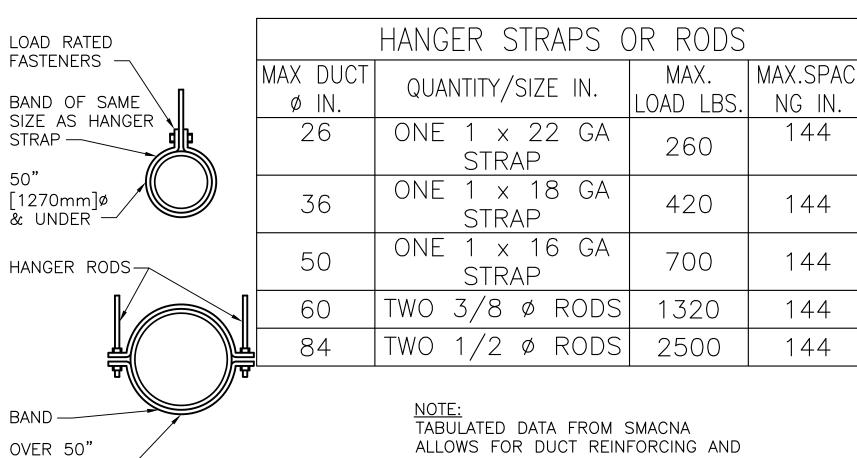
DISCHARGE TO DRAIN

1. VENT ALL HIGH POINTS INDICATED ABOVE.

2. IF AUTOMATIC AIR VENTS ARE USED, PIPE

TYPICAL AIR VENT

NO SCALE



INSULATION, BUT NO EXTERNAL LOAD.

TYPICAL DUCTWORK TRANSITION

PLAN OR SIDE VIEW

UNLESS OTHERWISE INDICATED ON PLANS, MAXIMUM ANGLES SHOWN SHALL APPLY.

COPPER TUBING

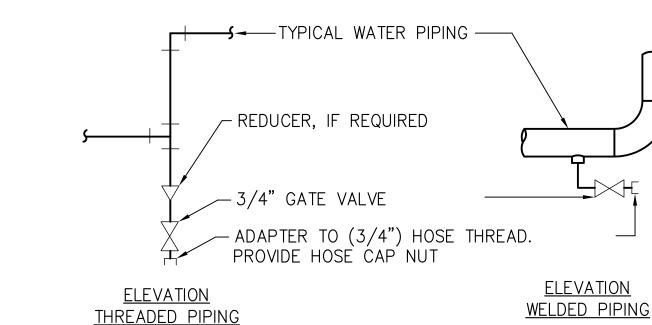
1/2" GATE VALVE

- 1/2" × 4"

NIPPLE

ROUND DUCT HANGERS

[1270mm]ø



TYPICAL CHILLED AND HOT WATER PIPING DRAIN VALVE CONNECTIONS

DUCTWORK RADIUS ELBOWS

KEY PLAN: STAMP:

CONSULTANTS:

p: 301.770.3520 f: 301.770.3521 Consultants www.nikatechnologies.com

Checked

FOR CONSTRUCTION Project Number Office of R636A8-10-001 Construction Building Number

ELECTRICAL CONDUIT PLUMBING VENT AND SUPPLY PIPING

HVAC PIPING

PLUMBING WASTE/ROOF DRAINAGE

╣ RECESSED LIGHT FIXTURES

FULLY SPRINKLERED

Department of Veterans Affairs

07/07/2009

1-H3 Dwg. **17** of **44**

Revisions:

VA FORM 08-623